DelDOT
Delaware Department of Transportation

Electronic Red Light Safety Program

Intersection Selection Process

May 1, 2013

Initial Screening

1) Intersections are first ranked (highest to lowest) by the total number of red-light running crashes using the most recent five years of available crash data. Summary crash data is used (i.e., individual police reports are not reviewed).
2) The following intersections are eliminated from further consideration:
   a) City of Wilmington and Milford-maintained signals
   b) Locations with existing ERLSP cameras
   c) Locations that were eliminated from consideration in prior years due to site constraints (see step 5 below)
   d) Locations where remedial improvements were installed during or after the crash study period that would reduce the potential for red-light running crashes (e.g., back plates, yellow change interval modifications)
   e) Locations where significant changes were made during or after study period (e.g., widening to provide additional lanes)
3) Since cameras are installed on an intersection approach, the top-ranked intersections (typically intersections with 5 or more red-light running crashes during the study period) identified in Steps 1 and 2 are then re-ranked (highest to lowest) by the highest number of “at-fault” crashes by approach based on a review of police reports.
4) The top-ranked intersections are evaluated to determine whether other types of engineering solutions could address the red-light running crashes.
   a) If the engineering solutions can be implemented by DelDOT Traffic, they are implemented based on availability of funding and the intersection is eliminated from consideration.
   b) If DelDOT Traffic determines that the solutions are not feasible by any means by which they can implement or cannot be implemented in a timely manner or may require a capital project, the intersection in question may still be considered for red-light camera installation.
   c) Required yellow change interval times are calculated. If the yellow change interval times are insufficient on the maximum “at-fault” crash approach, the yellow change interval times are corrected and the intersection is eliminated from consideration.

5) Site visits are performed to determine whether it is feasible to install and operate ERLSP equipment at the remaining candidate intersections. Factors considered include:
   a) Compatibility with site conditions/infrastructure
   b) Availability of right-of-way for ERLSP equipment
   c) Availability of clear lines of sight for camera perspectives
   d) Confirmation that no road construction or intersection upgrades that would disrupt the camera system are planned at the intersection in the near future

Final Screening

6) Actual violation data is collected (by the vendor) for the top intersections identified in the initial screening (steps 1 – 5).
7) The violation data is reviewed by DelDOT and compared to each intersection's red-light running crash data and a determination is made as to which approaches should be monitored based on the following:
   a) The approach with the highest number of crashes by at-fault approach shall be monitored
   b) Other approaches with a high frequency of red-light running crashes
   c) High frequency of violations
   d) Complementary movements (i.e., for approaches where the left-turn movement and the through movement share a stop line, both movements may be monitored)
8) In accordance with the authorizing legislation, the proposed locations are submitted for approval by the legislators who represent the area where the intersection is located.